CLAIMS

1. A coated super-hard abrasive comprising a core of super-hard abrasive material, an inner layer of a metal carbide, nitride, boride or carbonitride chemically bonded to an outer surface of the super-hard abrasive material and an outer layer of a metal carbonitride deposited on the inner layer.

2. A coated super-hard abrasive according to claim 1, wherein the outer layer is formed of titanium carbonitride.

3. A coated super-hard abrasive according to claim 1 or claim 2, wherein the outer layer is deposited by physical vapour deposition.

4. A coated super-hard abrasive according to any one of the preceding claims, wherein the ultra-hard abrasive material is diamond or cBN based.

5. A coated super-hard abrasive according to claim 4, wherein the ultra-hard abrasive material is selected from the group comprising diamond or cBN grit, a PCD substrate, a thermally stable PCD (TSPCD) substrate, a PcBN substrate, a CVD diamond film, and a single crystal diamond substrate.

6. A coated super-hard abrasive according to any one of the preceding claims, wherein the inner layer is formed from an element capable of forming (singly or in combination) carbides, nitrides or borides to the surface(s) of the abrasive material using a hot coating process.

7. A coated super-hard abrasive according to claim 7, wherein the element is selected from the group comprising groups IVa, Va, VIa, IIIb and IVb of the periodic table.

8. A coated super-hard abrasive according to any one of the preceding claims, wherein the inner layer is a titanium or chromium carbide coating in the case of a diamond based core, or a titanium or chromium nitride, boride or boronitride coating in the case of a cBN based core.